

WHAT IS CLAIMED IS:

- 1 1. A method comprising the steps of:
2 receiving first data associated with a block of data at a video processor;
3 when in a first mode of operation, accessing table data in a table in a first manner to
4 perform a first transform of the first data; and
5 when in a second mode of operation, accessing table data in the table in a second manner
6 to perform a second transform of the first data, wherein the second transform is an
7 inverse transform relative to the first transform.
- 1 2. The method as in Claim 1, wherein the block of video data is associated with 8x8 image
2 data.
- 1 3. The method as in Claim 1, wherein the block of video data is associated with 2-4-8 image
2 data.
- 1 4. The method as in Claim 1, further including the step of determining one of the first mode
2 of operation or the second mode of operation based on a tag associated with the first data,
3 wherein the tag identifies a transform associated with the first data.
- 1 5. The method as in Claim 1, wherein accessing in a first manner includes accessing the
2 table data in the table in a row-major scheme and accessing in a second manner includes
3 accessing the table data in the table in a column-major scheme.
- 1 6. The method as in Claim 1, wherein the table includes a discrete cosine transform matrix.

- 1 7. The method as in Claim 6, wherein the first transform includes a forward discrete cosine
2 transform and the second transform includes an inverse discrete cosine transform.
- 1 8. The method as in Claim 1, wherein the first and second transform are performed using
2 common hardware.

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- 1 9. A method comprising the steps of:
2 receiving data associated with a block of data at a video processor;
3 when the block of data is of a first type, providing a first table to a transform engine to
4 transform the data; and
5 when the block of data is of a second type, providing a second table to the transform
6 engine to transform the data.
- 1 10. The method as in Claim 9, further including the steps of:
2 when in a first mode of operation, accessing one of the first table or the second table in a
3 first manner to perform a first transform; and
4 when in a second mode of operation, accessing one of the first table or the second table in
5 a second manner to perform a second transform, wherein the second transform is
6 an inverse transform relative to the first transform.
- 1 11. The method as in Claim 10, wherein accessing in a first manner includes accessing one of
2 the first table or the second table using a row-major scheme and accessing in a second
3 manner includes accessing one of the first table or the second table using a column-major
4 scheme.
- 1 12. The method as in Claim 9, further including the step of determining the type of data.
- 1 13. The method as in Claim 12, wherein motion estimation is performed to determine the
2 type of data.
- 1 14. The method as in Claim 12, wherein a tag associated with the block of data is used to
2 determine the type of data.

- 1 15. The method as in Claim 9, wherein the first type includes 8-8 image data and the second
2 type includes 2-4-8 image data.
- 1 16. The method as in Claim 9, wherein the first table includes a first DCT matrix associated
2 with the first type and the second table includes a second DCT matrix associated with the
3 second type.

- 1 17. A method comprising the steps of:
2 receiving data associated with a block of data at a video processor;
3 providing a first table to a transform engine to generate a first transform of the data;
4 providing a second table to the transform engine to generate a second transform of the
5 data; and
6 selecting one of the first transform or the second transform dependent on a comparison of
7 values associated with the first transform and the second transform.
- 1 18. The method as in Claim 17, wherein the comparison includes identifying one of the first
2 transform or the second transform associated with smaller values.

- 1 19. A system comprising:
2 a reader to access data associated with a block of data;
3 a transform engine to transform the data according to a table;
4 a table access component to:
5 access said table in a first manner to perform a first transform;
6 access said table in a second manner to perform a second transform, wherein the
7 second transform is an inverse transform relative to the first transform; and
8 a memory to store said data, said table, and a result from one of said first transform or
9 said second transform.
- 1 20. The system as in Claim 19, wherein said block of data is associated with one of 8-8
2 image data or 2-4-8 image data.
- 3 21. The system as in Claim 19, wherein said reader includes an input port to determine one of
4 said first manner or said second manner to access said table.
- 5 22. The system as in Claim 21, wherein said first manner includes accessing said table in a
6 row-major scheme and said second manner includes accessing said table in a column-
7 major scheme.
- 1 23. The system as in Claim 19, wherein said table includes a discrete cosine transform matrix
2 and further wherein said first transform includes a forward discrete cosine transform and
3 said second transform includes an inverse discrete cosine transform.

- 1 24. A system comprising:
2 a reader to access data associated with a block of data, said reader to:
3 provide a first table to a transform engine, when the block of data is of a first type;
4 provide a second table to said transform engine, when the block of data is of a
5 second type;
6 said transform engine to transform said data using one of said first table or said second
7 table; and
8 a memory to store said data, said first table, said second table and a transform result from
9 said transform engine.
- 1 25. The system as in Claim 24, wherein the first type is 8-8 image data and the second type is
2 2-4-8 image data.
- 3 26. The system as in Claim 24, wherein said reader determines a type of data dependent on a
4 tag associated with the block of data.
- 5 27. The system as in Claim 24, wherein said first table includes a discrete cosine transform
6 associated with the first type and the said second table includes a discrete cosine
7 transform associated with the second type.